

**LGP SCIENCE STEERING COMMITTEE MEETING
Monday 19 March 2007, Antarctica New Zealand**

PRESENT:	Megan Balks (By Phone)	University of Waikato
	Vonda Cummings	NIWA
	Jenny Webster-Brown	University of Auckland
	Ian Hogg	University of Waikato
	Clive Howard-Williams	NIWA (LSSC Chairperson)
	Shulamit Gordon	Antarctica New Zealand
	Dean Peterson	Antarctica New Zealand

Actions from LSSC Meeting

LSSCer	Action Item	Status
Shul	Amend key question three in all documentation.	
	Source LTER systems diagram from Moorhead chapter in Priscu book.	
	Continue follow up of ARGOS installment at LGP AWS sites	
	Order copies of special edition and send to those listed.	
	Flag possibility of 2 nd special edition with David Walton at Antarctic Science.	
	Check to see if Artic, Alpine and Antarctic research journal includes marine research.	
	Add Science/Nature paper to 2008 agenda.	
	Ensure that LGP is represented at one large 2008 international conference at least	
	First draft of documents to show links of EBA and AGCS work. By Mid April.	
	Respond to Roberto's invite. Keep in touch with news on who will attend.	
	Give Craig Cary and Jackie Aislabie info on AMBIO.	
	Give Brian Sorrell and Craig Cary info on MERGE.	
	Send Pete Convey feedback on suggestions for EBA workshop at SCAR 08.	
	Invite Berry and Diana to LGP workshop at July conference	
	Ask LGP community if they have any links with Swedish scientists.	
	Update site plan in LGP Science and Operational Overview.	
	Present a 5 year plan (science and logistics) to the LSSC and to Ant NZ for review.	
	Encourage LGP researchers to highlight their link with the LGP in reports, publications, posters etc	
	Email LGP researchers to present a poster at 50 year conference.	
	Work on LGP synthesis poster for 50 year conference.	
Ensure Hallett and Darwin AWS are scheduled for download and maintenance this season.		
Put Gondwana baseline data sheets on LGP website.		

	Make a call for nominations for those who would like to be on the LSSC. Highlight the disciplines covered, and potential new disciplines.	
Dean	Contact Roberto to show interest in attending.	
	Forward AMBIO information to Alison Murray of CAML.	
	Contact Roberta Marinelli to touch base on LGP links.	
Megan	Take spare copy of special edition on travels. Get from Shul	
	Work with Jenny on how soil geochemistry could be covered in LGP. Initiate any new collaborations needed.	
	Consider taking up Chair of LSSC.	
Clive	Contact editor if EOS to see if there would be interest in LGP article.	
	Write letter of thanks to Sharon and David at Antarctic Science.	
	Talk with Megan before she heads to Europe for LGP discussions	
	Start discussions with Pete Convey (EBA) and John Turner (AGCS)	
	Send letter to LGP Pis to maximise opportunities if IPY contestable fund is announced.	
	Contact Pete Convey and John Turner re joint workshop session of EBA and AGCS for SCAR 08.	
Jenny	Report back on possible links for LGP in Environmental Contaminants action group straight after meeting.	
	Provide Shul with action group's website link once its know.	
	Work with Megan on how soil geochemistry could be covered in LGP. Initiate any new collaborations needed.	
All LSSC	Send Shul ideas of how to maximise LGP coverage in international science community.	

1. Apologies and Confirmation of Agenda

- Apologies from Allan Green. Ian Hogg standing in for this meeting.
- Order of some agenda points moved around (reflected in order of minutes)

2. Action Items from March 2006 Minutes

- Noticed that Key Question 3 has not been changed as was discussed last year. Question should now read: "How do ice dynamics (e.g. movement, melt, accumulation, ablation) influence ecosystems and ecosystem processes"
- Still need to find LTER's system model for discussion with LSSC. Possibly in John Priscu's book in chapter by Darryl Moorhead.
- Continue follow up of ARGOS installment at LGP AWS sites.

Shul: Amend key question three in all documentation.

Shul: Source LTER systems diagram from Moorhead chapter in Priscu book.

Shul: Continue follow up of ARGOS installment at LGP AWS sites.

3. Wrap-up of *Antarctic Science* Special Edition

- Total cost of special edition was NZ\$27,000
- Funds remaining from contributions are NZ\$4750.
- Agreed to use this money for:
 - a. Purchasing additional copies of the special edition (cost of US\$130 each) to send to targeted individuals who have not yet received a copy (initial copies only went to first authors). These are:
 - Arnold Heine (sponsor)
 - Riccardo Cattaneo-Vietti
 - Berry Lyons
 - Clive Howard-Williams
 - Jackie Aislabie
 - Allan Green
 - Ruth Berry (FRST)
 - Neville Smith (MFish)
 - Martin Cryer (MFish)
 - Roberta Marinelli (NSF Biology)
 - Diana Wall
 - Megan Balks
 - Carlo-Alberto Baroni (Italian programme)
 - 2 x library copies for circulation use
 - b. Retain remaining funds for the next special edition.
- Agreed that we should start panning for the next special edition.
- Flag possibility with David Walton at *Antarctic Science*.
- Also look into other possible journals, but agreed it needs to be a well-known one.
- Check to see if *Artic, Alpine and Antarctic research journal* includes marine research.
- Aim for Dec 1st 2009 submission deadline with publication by Dec 2010.
- Work towards having a major LGP article in *Science* or *Nature* for the future with a synthesis of findings. Recognise that LGP have visited too few sites for this to happen now. Mark on agenda for next year's meeting.
- Could submit an LGP article into EOS? Clive to find out if this would be of interest.
- Suggested to write a letter of thanks to Sharon and David at *Antarctic Science* for their work on the special edition.
- Thoughts on LGP presentations at international conferences e.g. AGU, EGU, ISAES meeting in Santa Barbara, Finish meeting.
- Agreed that an LGP session at SCAR 2008 conference is important.
- LGP should present at one large 2008 international conference at least.

Shul: Order copies of special edition and send to those listed.

Shul: Flag possibility of 2nd special edition with David Walton at *Antarctic Science*.

Shul: Check to see if *Artic, Alpine and Antarctic research journal* includes marine research.

Shul: Ensure that LGP is represented at one large 2008 international conference at least.

Shul: Add Science/Nature paper to 2008 agenda.

Clive: Contact editor if EOS to see if there would be interest in LGP article.

Clive: Write letter of thanks to Sharon and David at Antarctic Science.

4. Follow-up from International LGP Workshop at Hobart

- Thanks to Shulamit for her organisation of the workshop and production of the workshop report. Agreed all went very well.
- The format of 5 minute vignettes worked well, especially with the interdisciplinary audience. Recommend to continue with this.
- Some requests for the final report came from the LGP/EBA listserver announcement of the report – mainly from S. American contacts.
- Megan will be visiting Spanish on ANTPAS business and could maybe go to BAS too, if want to talk with people about the continent-wide LGP concept. Should talk with Antonio Quesada at Madrid University (Clive contact) and Leo Sancho (Allan contact). Give Megan spare copy of special edition to show at these meetings.
- Guest Editorial in special edition sparked from a paper presented at SCAR Hobart discussion how top climate models all show a difference of temperature change in Peninsula to Ross Sea region – so want to be able to quantify these differences. Changes could happen within the lifespan of a researcher – they could happen that fast.
- Want to use EBA as a vehicle for this study and work with other colleagues to link LGP work with Peninsula work. Link hypothesis with speed of change. Great potential for hypothesis-driven science.
- Would like to see integration between EBA and AGCS (biological and physical sciences).
- Need to produce a document outlining this link and the position of LGP in this. Include diagram with hypothesis. Then we can all work from the same baseline. Need a statement that covers the concept diagram, a clear idea of how the concept would work, and a straw man hypothesis for across the continent.
- This should be in two formats:
 - a. Two pager with diagram of linkages and stating what we are looking to do (first draft by mid-April. Finalised by May)
 - b. Report on LGP and links with EBA and AGCS, and a working model of what the group is proposing. Include achievements to date.
- Have been asked to present this at SCAR Exec meeting in July.
- Could open up opportunities for NZ scientists to work in the Peninsula. Those opportunities are already there – need scientist to scientists contact, but have to pay your way there.

Megan: Take spare copy of special edition on travels. Get from Shul

Clive: Talk with Megan before she heads to Europe for LGP discussions

Clive: Start discussions with Pete Convey (EBA) and John Turner (AGCS)

Shul: First draft of documents to show links of EBA and AGCS work. By Mid April.

5. Links with EBA

- Ian Hogg was thinking of having an EBA workshop in conjunction with a DOC conservation conference in Hamilton, but it clashes with the 50year Antarctic Conference, so this will not be possible.
- Noted that Pete Convey from EBA has indicated that there are EBA funds available for EBA-related workshops.
- Discussed Roberto Bargagli (Italian Biologist) invite to 2-3 NZ biologists to attend Italian Antarctic Biology Planning meeting in July 07. Ian Hogg has accepted invitation. Other possibilities to attend are Simon Thrush (NIWA, marine), Dean and Megan (they will be in the area at that time anyway). Seen as very important to have NZ attendance as we really want to promote the collaborations with the Italians.
- Discussion on AMBIO project within EBA. Put Craig Cary and Jackie Aislabie in touch with this. Dean to forward info to Alison Murray of CAML.
- Discussed link with MERGE. Bring this to attention of Brian Sorrell and Craig Cary.
- News on IPY. Trying for 3 sources of funds:
 - a. Ship time for CAML voyage;
 - b. Science money for CAML voyage;
 - c. Contestable fund for projects identified as IPY NZ projects. This fund will be bid for by NZ-IPY projects in a process likely run by FRST.
- Expected to hear on outcome of funding from Treasury soon.
- If there is money for a contestable fund need to think of how to maximise the opportunity for LGP. Recommend inter-agency bids with new ideas, but that are attainable within 2 years. Maybe have approx 4 bids that include LGP-related groups. Could link this to potential final outcomes for LGP.
- Could also look at an avenue of funding data management from the IPY funds.
- If there is an announcement for a contestable fund, Clive to send letter to LGP PIs to maximise opportunities. Need to keep all LGPers informed of IPY happenings.
- Agree that the LGP should be part of an EBA workshop at SCAR Science meeting 2008. Would be good to use LGP workshop format of short 5 minute presentations followed by discussion. Pete Conveys idea of workshop on biodiversity gradients, and bringing the LGP into this was supported.
- Would also like to see a link with the AGCS as part of the workshop too.
- LGP links with EBA are being promoted through metadata too. EBA is now a project DIF in the Antarctic Master Directory, so all metadata linked to LGP will also be linked to EBA.
- Jenny is part of a SCAR Action Group on Environmental Contaminants. They have a workshop in Italy in June 07. Could look at how fates of contaminants change as climate changes. See where this could link with LGP. Could be important to include in report to SCAR exec meeting.

Shul: Respond to Roberto's invite. Keep in touch with news on who will attend.

Shul: Give Craig Cary and Jackie Aislabie info on AMBIO.

Shul: Give Brian Sorrell and Craig Cary info on MERGE.

Shul: Send Pete Convey feedback on suggestions for EBA workshop at SCAR 08.

Dean: Contact Roberto to show interest in attending.

Dean: Forward AMBIO information to Alison Murray of CAML.
Clive: Send letter to LGP Pis to maximise opportunities if IPY contestable fund is announced.
Clive: Contact Pete Convey and John Turner re joint workshop session of EBA and AGCS for SCAR 08.
Jenny: Report back on possible links for LGP in Environmental Contaminants action group straight after meeting.
Jenny: Provide Shul with action group's website link once its know.

6. Status of Science Collaborations in the Ross Sea region

- **USA:** Diana and Berry's Darwin proposals were not supported for 07/08. Will try again for following year. Still important to keep the links between the scientists going. Jenny to talk with Berry in June.
- Invite Berry and Diana to LGP workshop at July conference as they are invited speakers to the conference.
- Simon Thrush involved in Stacey Kim's marine NSF proposal.
- Nothing more heard from the Transantarctic Mountains Workshop held by the NSF.
- **Italy:** Will get more feedback after the Italian Biology workshop.
- NIWA's ICECUBE researchers trying to formalise marine links with Italians. Hopefully this will help for funding of both groups.
- Ant NZ very appreciative of all the support Italians have given the NZ programme. Identify ways we can support Italian scientists where possible.
- Megan continuing work with Mauro.
- **Sweden:** Sweden has offered NZ use of their icebreaker in Ross Sea once its icebreaking contract has finished. Good to identify any science links with Sweden that we have, or could make.

Shul: Invite Berry and Diana to LGP workshop at July conference.
Shul: Ask LGP community if they have any links with Swedish scientists.
Dean: Contact Roberta Marinelli to touch base on LGP links.

7. LGP Direction

- LGP workshop at 50 Year Conference in July. Encourage same format as last year – short presentations from LGP researchers followed by discussion. Topics to discuss include:
 - Are the key questions still valid?
 - What are the outcomes of LGP? What are we aiming to provide?
 - Are we going about things the right way (science and logistics)?
 - What new areas of science should we cover?
- Although the LGP was not set up to produce specific outcomes (but more to understand change), may be good to think of achievements to attain in the next 5-7 years.
- Could package the smaller studies to demonstrate the ecosystems of each site and try and show what the drivers are at each site. Recognise we don't have enough data for this now.
- Are all the key questions being answered at the same sites?

- Outcomes that look at global climate change. What will be the *driver* of ecosystem change with global climate change? LGP uses the gradient to define the change.
- Link to AGCS to look at regional/local climate change. Nancy Bertler work useful for this.
- Do we want a vision of where to be in 5 years? Maybe the group can make more informed conclusions then and could amend key questions and hypothesis? Could synthesise data in five year and identify the gaps and re-define questions.
- Suggest an LGP Synthesis Conference in 2012. Review and benchmark conference.
- Continue to use the key questions as threads for research.
- New collaborations should come through link with EBA.
- New areas of science LGP should cover:
 - Soil Geochemistry. Comes under key question 7. Jenny has capability for this but not the funding. Megan could get students to do some work on this. Maybe Landcare/Massey/Lincoln could be brought in here?
 - Sea ice physics and oceanography: Contact Mark McGuinness? P3 Orion could be useful for mapping sea ice and glacial features along the Victoria Land coast.
 - Links between glacial and terrestrial runoff into the marine system.

Megan and Jenny: Work on how soil geochemistry could be covered in LGP. Initiate any new collaborations needed.

Shul: Contact Mark McGuinness re sea ice work in LGP.

8. Plans for the Future

- Ken Ryan, Mary Sewell and Craig Marshall still have one more season at Gondwana (07/08). Mary would find one additional season there useful (08/09).
- Marine to move on to Granite Harbour for 09/10 and 10/11 and this would realign with terrestrial groups – which is optimal so that marine and terrestrial work is done at the same time at one site.
- Marine group would like to go to a more southern site (e.g., New Harbour) after Granite Harbour. Keen to complete transect by moving progressively south down the Victoria Land Coast, before visiting other more northern locations. Craig Marshall keen for the Granite/New Harbour area next for both his marine and terrestrial work.
- Terrestrial group are unlikely to want to go to New Harbour as a lot of work has been done in that work already. This maybe the time that the terrestrial group goes down to Beardmore. Can this be linked to US work for efficiencies?
- Need to present a 5 year plan for both science and logistics. This should include structure and coordination with work in the Peninsula.

- LGP has been successful in part to the presence of a Project Manager. Need a vision of how the LGP Project manager would work in with Peninsula research linked with LGP.
- Reminder that video conferencing is a useful tool.

Shul: Update site plan in LGP Science and Operational Overview.

Shul: Present a 5 year plan (science and logistics) to the LSSC and to Ant NZ for review.

9. Publicity

- There have been suggestions to give the LGP more publicity like ANDRILL has done.
- Agreed that LGP does not have a particular story to sell like ANDRILL has for e.g. and that our 'publicity' is directed more to the science community than to the public.
- Do want to encourage LGP researchers to highlight their link with the LGP in reports, publications, and posters etc. – as it puts the work into a bigger context.
- Want to encourage LGP researchers to present a poster at 50 year conference. Can try and have an LGP poster area so they are all on show together.
- Once these posters are known, suggest making a synthesis poster taking all the work in to account to show how all the LGP posters fit into the bigger picture of LGP. This could be in cartoon format showing the different ecosystems and the work being done on different parts of them by the LGP researchers.

Shul: Encourage LGP researchers to highlight their link with the LGP in reports, publications, posters etc.

Shul: Email LGP researchers to present a poster at 50 year conference.

Shul: Work on LGP synthesis poster for 50 year conference.

All: Send Shul ideas of how to maximise LGP coverage in international science community.

10. Baseline Data

- Need to ensure that AWS data is downloaded regularly. Look into possibility of putting ARGOS on all LGP AWS.
- Baseline data sheets collected for Gondwana. Will be put on web when ready.

Shul: Ensure Hallett and Darwin AWS are scheduled for download and maintenance this season.

Shul: Put Gondwana baseline data sheets on LGP website.

11. Review of LSSC Membership

- Clive suggested that the Chair could be changed. Asked Megan if she would like to take this on. All agreed that it is important for Clive to remain on the committee in some way.
- Open to having new members in the LSSC. Still need to cover the main disciplines. Could expand the committee by bringing in disciplines identified that LGP should encourage links with (e.g. physical sciences).
- Noted that all those on the committee would like to stay on it, but agreed that there should be a call for nominations for the LSSC.

Megan: Consider taking up Chair of LSSC.

Shul: Make a call for nominations for those who would like to be on the LSSC. Highlight the disciplines covered, and potential new disciplines.